

Nord Stream 2: Rule no more, but still divide

Marco Giuli

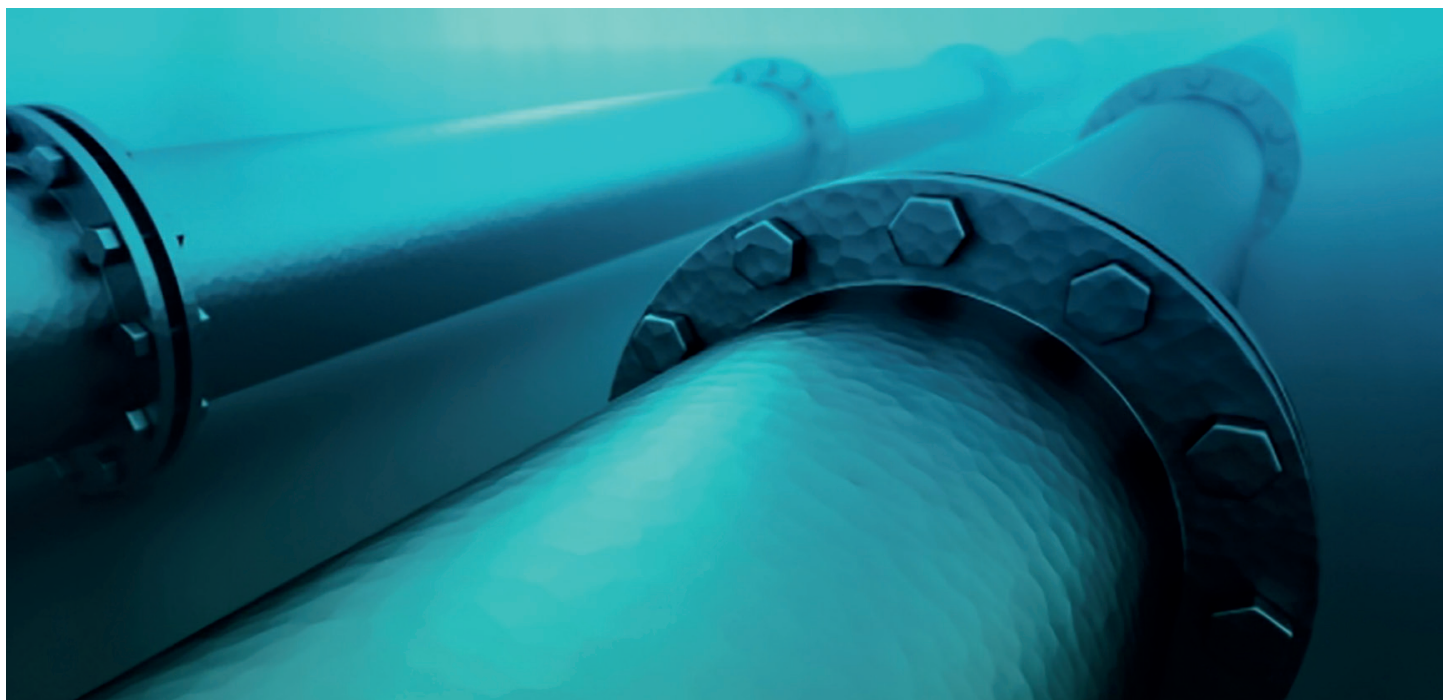


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EU internal market for energy, energy security and energy diplomacy, international political economy of energy, EU-Russia energy relations, energy poverty, EU Single Market

ACKNOWLEDGEMENTS / DISCLAIMER

The author is grateful to Janis A. Emmanouilidis, Annika Hedberg, Marc de Fleurieu and Rebecca Castermans for their valuable comments on earlier drafts of this paper. The views expressed in this Issue Paper are the sole responsibility of the author.

Executive summary

Nord Stream 2 (NS2) would lead to a sizeable capacity increase of the gas route connecting Russia and Germany. This paper examines the economic, strategic, legal and political implications of NS2 from an EU perspective. The paper draws the following conclusions.

- Assessing the commercial rationale of NS2 based on prospects for EU gas demand is risky because of the poor reliability of past projections. Under some scenarios, EU gas imports are set to increase in short to medium term, notably to compensate declining domestic production. The EU relies, however, on a vast spare import capacity, which suggests there is no urgent need for additional import infrastructures (but those required to meet the EU's competition and energy security objectives).
- The commercial rationale for NS2 becomes more evident within the framework of Russia's geo-economic ambitions. A battle for EU market shares is likely to ensue between Russian gas and liquefied natural gas (LNG). NS2 would enable Gazprom to tame rising competition from LNG and avoid reliance on Ukraine for the transit of its gas production – a longstanding Russian geopolitical objective.
- The impact of NS2 on prices and competition will hinge on Gazprom's marketing strategy. Under certain conditions, NS2 could expose the EU to a fragmentation of its internal energy market and the Central and Eastern European Countries (CEECs) to higher costs to access Western short-term markets. Proper implementation of the EU's internal market rules remains a pre-condition to reduce the risk of market segmentation associated with Nord Stream 2.
- Considering the benign market conditions and the EU's improved regulatory framework and infrastructure developments, NS2 is unlikely to pose a direct threat to the Union's overall energy security. But NS2 would turn CEECs into end consumers, depriving them of the energy security that comes with their current transit role. In the EU, market and solidarity mechanisms could help to mitigate the risks. The concentration of sizeable capacity on a single route calls for contingency plans that would need the Ukrainian network to remain sufficiently operational.
- The impact of NS2 on route diversification will also hinge on Gazprom's marketing strategy. Uncertainty regarding Gazprom's stance will likely induce prudence among private investors. Public resources may have to step in to invest in infrastructures that are needed for the sake of competition or energy security. Only careful planning will ensure that consumers benefit from a net positive welfare effect.
- The applicability of the Third Energy Package (TEP) to the offshore section of NS2 remains contested. In an attempt to fill this gap, the Commission is proposing to extend the EU's Gas Directive to all import pipelines and is asking member states for a mandate to negotiate an intergovernmental agreement with Russia. The unanimous and robust backing of these initiatives by EU member states would provide an opportunity to push Russia to align its legislation, at least in part, with the EU's objectives.
- Even if the NS2 operational framework were to fall under the EU's regulatory regime, the pipeline would remain politically problematic. Its mere prospect has tilted the strategic balance between Ukraine and Russia in favour of the latter, nurtured mistrust among EU member states, and created tensions between the EU and the US. Germany's final recognition of the political problems associated with the pipeline translated in the suggestion that some level of gas transit through Ukraine should be maintained. However, it is not clear how this can be guaranteed.
- Even if the EU makes use of its regulatory means to cope with the political problems associated with NS2, member states still have the final word. Enduring misalignments in the energy preferences of member states hampers the EU's international actorness and exposes some member states to the political leverage of third countries.

List of recommendations

The European Union and its member states must:

- 1 Confront the risks of market segmentation associated with Nord Stream 2** as a result of the congestion of west-east pipelines. The EU and its members should fully implement the liberalisation framework included in the Third Energy Package.
- 2 Adopt a radical integration approach when revising the gas market design in 2020.**
- 3 Ensure that CEECs can rely on sufficient options.** Should investments in new infrastructures aimed at spurring competition, reinforcing energy security or de-congesting the west-east corridor be made more expensive as a result of NS2, the countries enjoying positive welfare effects from the new pipeline should be required to invest part of it to support infrastructural upgrade in those countries which are expected to suffer losses.
- 4 Encourage, where necessary, regional pooling of gas purchase in CEECs** to negotiate better contractual conditions with Gazprom. Such a re-negotiation opportunity would emerge with the change of delivery point resulting from NS2.
- 5 Perform new energy security stress tests** on the assumption of the construction of NS2.
- 6 Focus diversification efforts** on intra-EU interconnections and flexible, small-scale LNG import facilities in the most vulnerable sections of the internal market.
- 7 Give the Commission a mandate to negotiate** the operating regime for new pipelines and support the review of the Gas Directive to clarify the operational regime of pipelines connecting the EU with third countries. To bridge divisions among member states, agree to an ‘internal energy bargain’ that should include: i) the full opening of national markets in alignment with the Third Energy Package, ii) an enhanced role for the EU in external energy relations.
- 8 Subject any approval of NS2 to Russia’s fulfilment of the Minsk II requirements.**
- 9 Make the continuation of the Ukrainian route an attractive option for all stakeholders** by pushing for lower transit tariffs and the full alignment with EU legislation.
- 10 Include large gas import projects in the National Energy and Climate Plans**, foreseen by the Energy Union Governance Regulation proposal, to boost consultation on large gas import projects. Give the Agency for the Cooperation of Energy Regulators (ACER) an arbiter role.

List of acronyms

ACER	Agency for the Cooperation of Energy Regulators	LTC	Long-term contracts
ACQ	Annual Contracted Quantity	MCQ	Minimum Contracted Quantity
Bcm	Billion cubic meters	NECPs	National Climate and Energy Plans
CEE	Central and Eastern Europe	NRA	National Regulatory Agency
CEECs	Central and Eastern European Countries	NWE	North-West Europe
CEGH	Central-Eastern European Hub	PCI	Project of Common Interest
CMP	Congestion Management Procedure	SEE	South-Eastern Europe
EBRD	European Bank for Reconstruction and Development	SEECs	South-Eastern European Countries
EIB	European Investment Bank	SGC	Southern Gas Corridor
EU	European Union	TAP	Trans-Adriatic Pipeline
EEZ	Exclusive Economic Zone	TANAP	Trans-Anatolian Pipeline
EUR	Euro	TEP	Third Energy Package
GTS	Gas Transmission System (in Ukraine)	ToP	Take-or-Pay
IEA	International Energy Agency	TPA	Third-Party Access
IEM	Internal Energy Market	TSO	Transmission System Operator
IGA	Intergovernmental Agreement	TYNDP	Ten-Years Network Development Plan
IGB	Interconnector Greece-Bulgaria	UNCLOS	United Nations Convention on the Law Of the Sea
ISO	Independent System Operator	UPU	Urengoy-Pomary-Uzhgorod
LNG	Liquefied Natural Gas	USD	US Dollars

Introduction

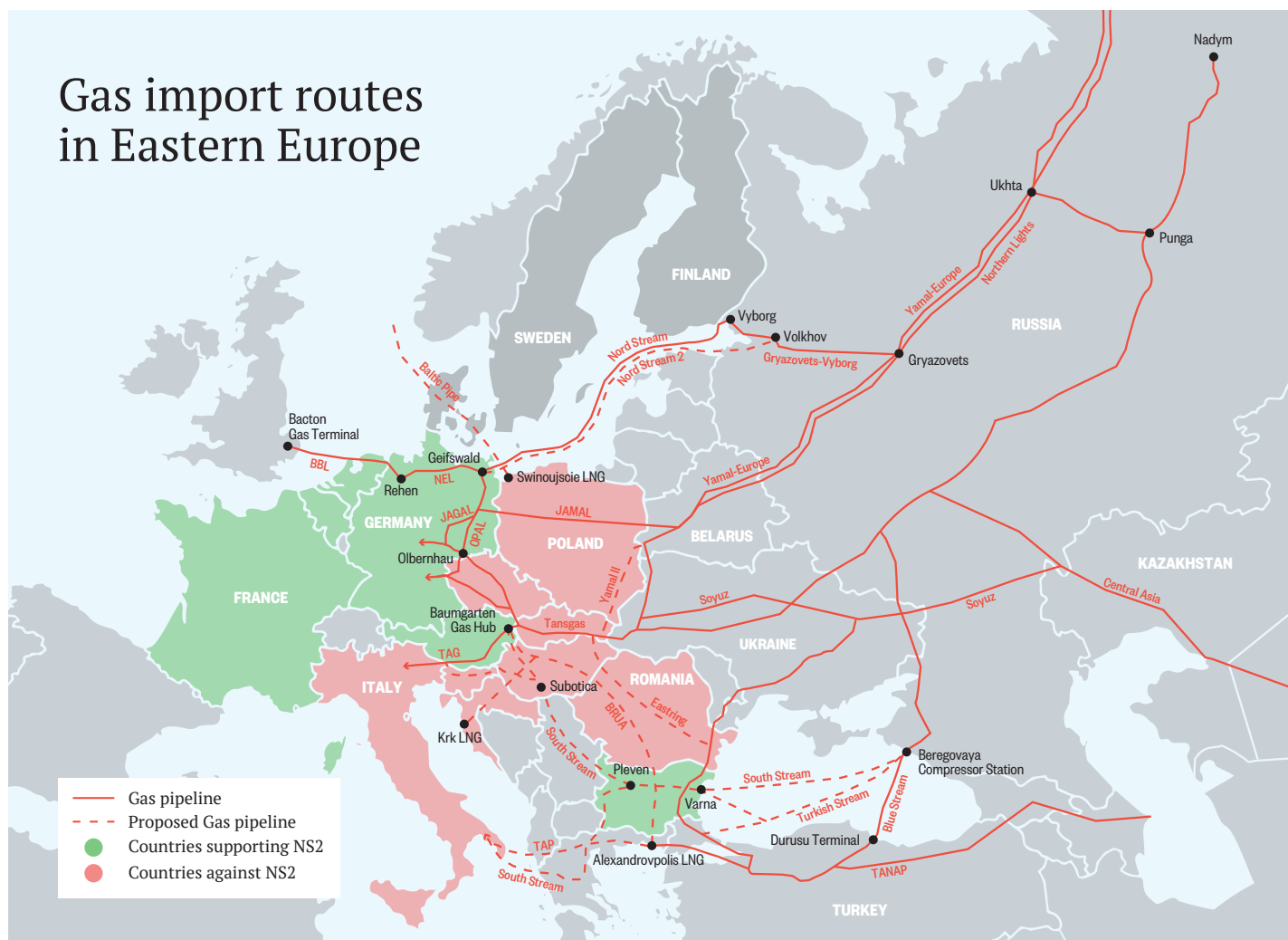
In September 2015, Russian gas firm Gazprom signed a shareholder agreement with five European companies – E.ON (now Uniper), Royal Dutch Shell, OMV, Wintershall, and Engie – for the doubling of the Nord Stream pipeline. The expansion, named Nord Stream 2 (NS2), would follow the same route and add 55 bcm of annual capacity to the current infrastructure. NS2 is expected to carry gas from the Yamal peninsula (Bovanenkovo field) to the European Union (EU). The 1200 km-long route would start in the Narva Bay and continue through the Baltic Sea in the exclusive economic zones of Finland, Sweden, Denmark, and Germany, and the coastal waters of Denmark and Germany, until the landing point in Greifswald, Germany.

According to recent estimates, the total cost of the pipeline would amount to EUR 9.5 bn. Originally, Gazprom was supposed to hold a 50% majority stake in the project, while the five other partners would get 10% each. However, the European firms withdrew from the consortium after the Polish antitrust authority declared it would potentially challenge NS2. They remained, however, supportive of the project as investors. Currently, NS2 AG, the Swiss-based project company created for the planning, construction, and operation of the pipeline, is wholly owned by Gazprom.

For the EU, the announcement of NS2 came at a delicate moment. Politically, the pipeline goes against several of the objectives of the Energy Union, a flagship initiative of the Juncker Commission. Economically, it will cement Gazprom's dominant position in the eastern parts of the EU market, and give Gazprom a competitive advantage over newcomers, notably in the liquefied natural gas (LNG) market. Geopolitically, it could deprive Ukraine of its transit role, a strategic asset and an important source of financial resources. As such, NS2 is at odds with the EU's commitment to support the country following Russia's annexation of Crimea and continued support to separatist forces. To date, the European Commission (EC), a majority of MEPs in the European Parliament, and several EU member states have openly criticised this pipeline.

This Issue Paper intends to address the market, strategic, legal, and political issues raised by NS2 from an EU perspective. It will first assess its likely impact on the EU's gas market dynamics. Second, it will explore its direct and indirect effects on the EU's energy security. Third, it will discuss the main legal and political issues related to the pipeline.

Gas import routes in Eastern Europe



1. A market perspective

An infrastructure as massive as NS2 is set to bring about a sizeable alteration of the EU's gas imports and the functioning of its Internal Energy Market (IEM). This section discusses the pipeline's business rationale, assesses its risks for EU gas markets and presents ways to mitigate them. It starts by examining the need for additional capacity in light of the trends for EU gas demand. It then considers the pipeline extension against Gazprom's strategic options. Finally, it explores the potential impacts of NS2 on the EU's internal market.

1.1 DOES THE EU NEED MORE GAS?

Gas demand modelling is a daunting task. It needs to factor in the growing weight of the decarbonisation agenda in energy policy, heightened market volatility, the disrupting impact of technological developments, unpredictable consumer preferences, and unstable economic cycles. As a result, **European demand has often been overestimated in the past**. Between 2006 and 2014, forecasts by the International Energy Agency (IEA) for EU gas demand in 2030 have been revised downwards five consecutive times from 560 to 390 bcm.¹ Between 2003 and 2013, the EC changed its forecasts for 2030 six times from 620 to 400 bcm.²

The open question about the future is the extent to which, in the short-to-medium term, the trend towards demand reduction, increased deployment of renewable energy sources (RES), and the use of new gas sources (LNG) will offset the phasing out of coal and nuclear capacity.

In the specific markets to be serviced by NS2, there has been a downward trend in gas consumption since 2006. Sluggish growth, the subsidised penetration of renewables in the energy mix, efficiency gains, and an underperforming carbon pricing scheme (which made coal more competitive than gas) have contributed to a demand drop of 10.7% in Central Western Europe³ and of 5.9% in Central Eastern Europe (CEE)⁴.

Between 2006 and 2016, all countries in these regions have experienced a reduction in gas demand (except Poland). Nevertheless, small signals of demand recovery have appeared since 2014. The open question about the future is the extent to which, in the short-to-medium

term, the trend towards demand reduction, increased deployment of renewable energy sources (RES), and the use of new gas sources (LNG) will offset the phasing out of coal and nuclear capacity and the reduction of domestic gas production.

What is more readily predictable is the rate of domestic depletion of gas resources in the EU. In the Netherlands and the UK, gas production fell respectively by 34.6% and 40% between 2006 and 2016. The decline in the supply from the Netherlands is likely to accelerate as a result of the intensification of seismic events in Groningen and rising public pressure to close the field.⁵ Norway and Algeria, which respectively accounted for 36.6% and 13.8% of EU gas imports in 2016, have seen their production grow only slightly between 2006 and 2016 (British Petroleum 2017). The outlook for exports appears constrained in the long run, either by commercial risk in Norway (Hall 2018) or booming domestic demand in Algeria.

The IEA has drawn various scenarios for the EU over the period 2020-2040 (IEA 2017). Most anticipate that EU gas imports will increase in the short-to-medium term because of declining domestic production. Consequently, **Gazprom and LNG providers are set to battle for additional European market shares**. In the long run, Europe intends to become a carbon-free economy, which may call into question the need for an expansion of gas pipelines.

The EU already relies on a vast import capacity that is likely to exceed any projected demand increase (Fig. 1 and 2 on page 7). In 2016, EU gas imports amounted to 310.6 bcm against 700 bcm of import capacity (BP 2017). Even if the current oversupply of LNG comes to an end – as many predict it will as a result of the forthcoming expansion of Asian demand – Russia could fill in the gaps thanks to the existing network of pipelines (provided they are adequately maintained). **Against this backdrop, it seems that Gazprom's commercial motives for expanding its export capacity to Europe are only partly based on the EU's gas demand projections.**

1.2 THE COMMERCIAL INTEREST OF GAZPROM

To understand the decision to build additional capacity, one must consider the project in the context of Gazprom's economic predicament. Over the past decade, Gazprom faced rapidly evolving market conditions, due to structural and cyclical factors.

On the structural side, LNG brought flexibility and competition in gas markets. For a long time, gas had been traded regionally, with stiff contractual formulas reflecting the rigidity of pipeline trading and the geophysical characteristics of gas. Investments used to require exclusive and sustained relations between buyers and sellers. Security of demand has been guaranteed by destination

and Take-or-Pay clauses, while pricing has been, and still is, indexed to the prices of oil products. Recently, technological innovations have removed some of the rigidities by reducing the costs of the liquefaction, regasification and storage of gas. Arbitrage possibilities have emerged between different regional markets. Heightened international competition has spurred global price convergence. Short-term, spot trading indexed on gas-to-gas competition (rather than oil) for uncontracted gas have now developed in mature markets, thus putting traditional business models under pressure.

On the cyclical side, shale gas production in North America has expanded from 524 to 749.2 bcm between 2006 and 2016. So has the global liquefaction capacity, which is expected to rise by 200 bcm between 2014 and 2020 (Fig.3 on page 8). At the same time, sluggish demand has exerted downward pressures on spot market prices in North-Western Europe (NWE). Moreover, the EU has become a more contestable market as a result of regulatory changes and an upgrade in infrastructure.

In 2009, it adopted the Third Energy Package, a legislation foreseeing the separation of ownership and use of gas infrastructure and the access of third parties to facilitate competition in the internal market. More recently, the Directorate General for Competition investigated abusive market practices allegedly perpetrated

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by Gazprom in Eastern Europe. Following an antitrust proceeding against Gazprom in 2018, the Russian firm accepted to align its contractual practices in Central and Eastern European countries (CEECs) with EU legislation to avoid a fine amounting to 10% of its turnover.⁶

Finally, Europeans have raised their regasification capacity to 210 bcm in 2016. The ratio between used and overall capacity amounted to 23.1%. The enhanced interconnection of regional wholesale markets throughout the EU encouraged the emergence of gas hubs at trading points, reflecting the short-term equilibrium between supply and demand. This interconnection has

Fig. 1

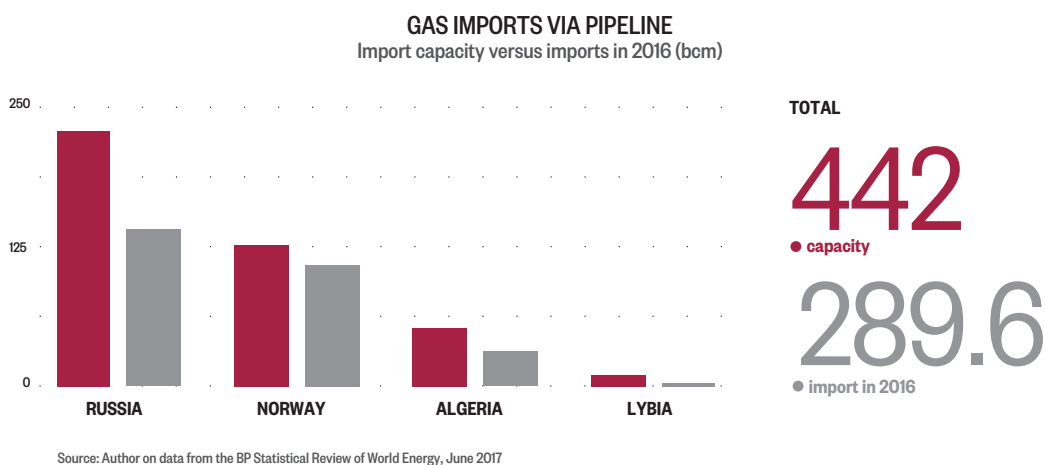


Fig. 2

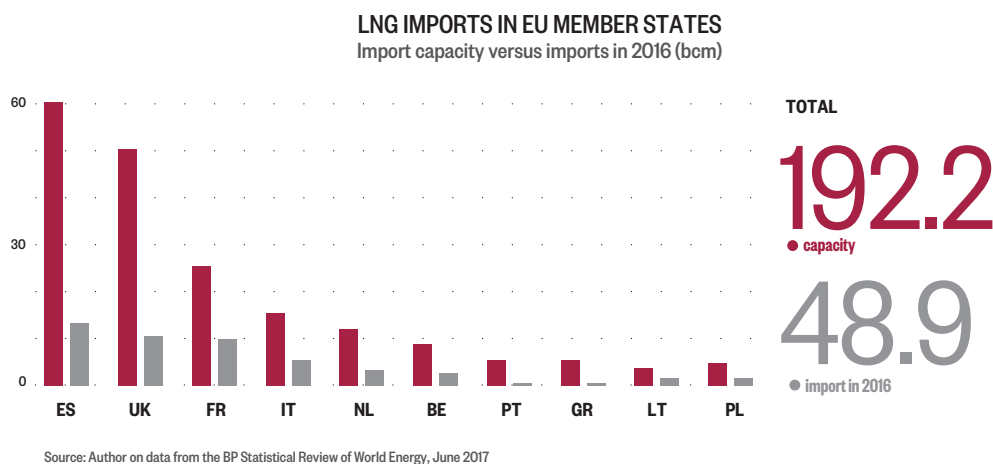


Fig. 3

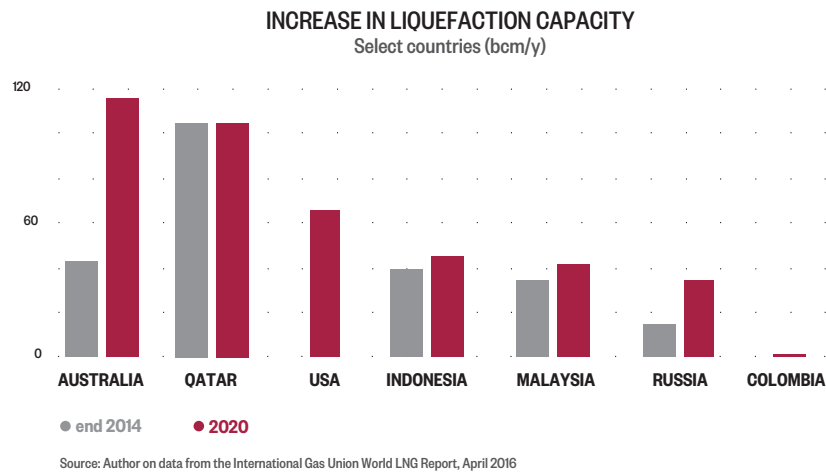
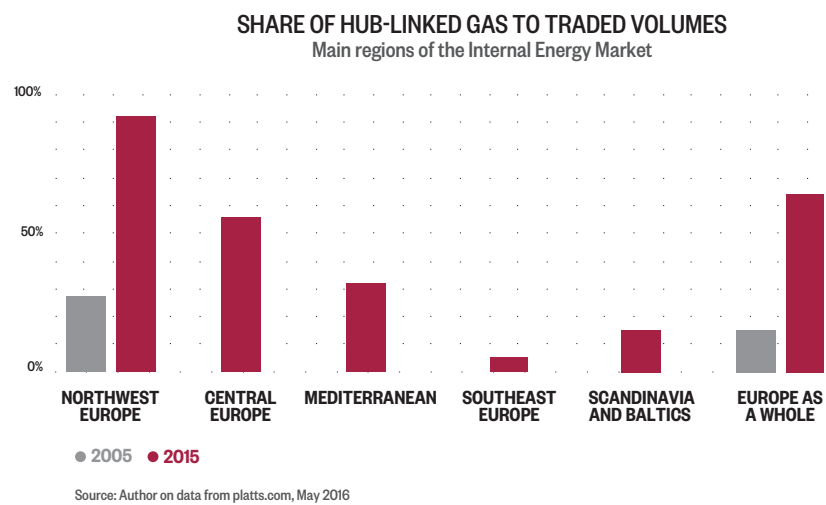


Fig. 4



reduced the share of gas traded under long-term, oil-indexed contracts. The percentage of hub pricing in EU gas trading has risen from 15% to 64% between 2005 and 2015, albeit unevenly: hub trading has reached 92.1% in NWE (Fig.4 above), while it remains below 10% in the less connected parts of South-Eastern Europe. Still, the EU antitrust proceeding will help the most isolated and captive gas regions in Eastern Europe to buy at conditions similar to those of the most open and contestable markets in NWE.

The combination of these factors has challenged Gazprom's business model, which relied on long-term contracts (LTCs), take-or-pay conditions⁷ (ToP), restrictive territorial clauses⁸, indexation to oil product prices, and preferred relations with large national European midstream buyers (Giuli 2015; Franza 2016).

In response to the new market environment, Gazprom has moved from defending prices to protecting market shares. Although it did not fully embrace hub pricing (adopted by suppliers such as Equinor and Gas Terra), the Russian firm has been commercially aggressive. It has negotiated several discounts, introduced partial spot pricing, and lowered, on an individual basis, the minimum offtake requirement for midstream buyers in Western Europe.⁹

(Franza 2016). Between 2008 and 2015, the average price of Russian gas at the EU border¹⁰ has fallen from 14.50 to 6.17 USD/Mbtu, thus aligning with Western hub prices (Fig.5 on page 9).

Gazprom has also begun auction selling limited quantities of non-contracted gas at the German border via the Nord Stream 1 pipeline.¹¹ It is unlikely, however, to be enough to signal an intent to move away from LTCs (Boussena and Locatelli 2017). Finally, under the pressure of the EU's competition watchdog,¹² Gazprom has conceded to end its discriminatory practices in Eastern Europe, and to mainstream the conditions it offered to Western European buyers (Stern and Yafimava 2017). This adaptive approach has proven successful. **Although a sizeable share of Gazprom's revenues has slipped,¹³ the company has managed to consolidate its position in the EU market,** accounting for 33.9% of gas demand in 2016, slightly above its 2006 share (Fig.6 on page 9).

Russia has valuable assets to confront a more competitive gas landscape. First, Russian gas production costs are lower than those of its

Fig. 5

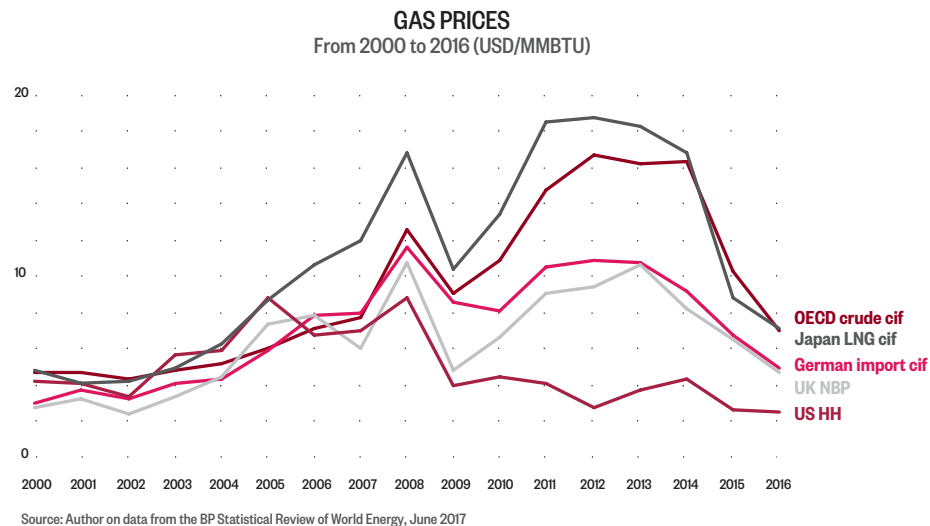
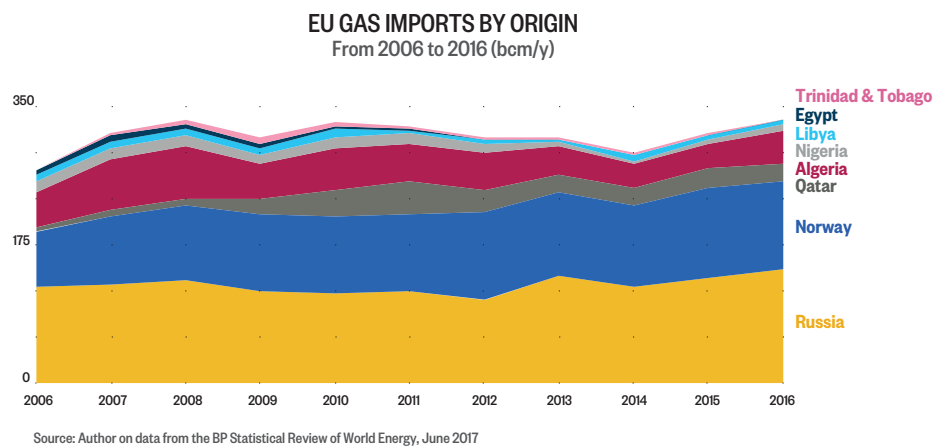


Fig. 6



competitors. Second, it relies on an already developed and amortised network of pipelines (amounting to an export capacity of 176 bcm through Ukraine, Belarus, and Nord Stream 1) whose costs are sunk.

To date, Gazprom's spare production capacity is estimated between 100 and 150 bcm/year, as a result of past overinvestment, lower-than-expected European demand, and rising domestic competition from other gas producers such as Rosneft' and Novatek. Considering the volumes, **Gazprom could quickly become the price reference on spot markets if it were to abandon LTCs and fully embrace spot trading** (Franza 2016).

With NS2, Gazprom would have the possibility to flood NWE markets with cheap gas. Gazprom could aspire to set the reference price for the marginal costs of developing LNG, which the Russian company considers as its forthcoming top competitor (Boussena and Locatelli 2017). NS2 would also help Russia to pursue its marketing strategy without the rigidities associated to the Ukrainian route – such as transit fees and physical bottlenecks – which could prevent Gazprom from reacting promptly to changing conditions in global markets.

1.3 PRICES AND COMPETITION IN THE EU GAS MARKET: DIVERGING VIEWS

As long as the excess in LNG supply (in the short-to-medium term) forces Gazprom to keep rates low, NS2 will lower costs in the NWE market zones. The German and Austrian market areas would then benefit from NS2: it would increase their liquidity, strengthen their hubs, and preserve and expand their distribution role at a time when maritime trading of LNG is set to challenge their continental centrality.

There is no consensus on the potential impact on prices and competition of Nord Stream 2 on Central Eastern European countries. The fact that Gazprom's future marketing strategy remains unknown can partly explain such a lack of consensus.

As for the other market zones to be serviced by NS2, notably the Central and Eastern European (CEE) region, there is **no consensus on the potential impact on prices and competition**.

The fact that **Gazprom's future marketing strategy remains unknown** can partly explain such a lack of consensus. Whether Gazprom will re-route LTCs from the Ukraine-Europe route to NS2 or will instead switch to spot markets will have different consequences for the CEE markets.

The first possibility is that long-term flows currently routed through Ukraine will be re-routed via NS2, thus generating congestion at the interconnection points between western Europe and CEECs. This re-routing would reduce the capacity of CEE countries to access non-Russian gas traded on western short-term markets. Under this scenario, CEECs would risk becoming a captive market for Gazprom and thus exposed to higher prices. Some predict that NS2 would prompt congestion at the Czech-Slovak and the Slovak-Hungarian connections by 2020, leaving almost no capacity available for short-term deliveries from the West (Kotek *et al.* 2017). Similarly, LTCs could take up half of the capacity of the German-Austrian connection, which would have been entirely open to near-term deliveries otherwise.

The least impacted pipeline would be the Austrian-Hungarian one where, according to the authors, LTC booking would rise from 59% to 75%. In March 2017, Gazprom procured downstream capacity until 2039 from the entry point in Greifswald to the Czech-Slovak border (EPSC 2017), allegedly confirming its intention to re-route a sizeable part of its guaranteed contracted exports.

Investment in additional west-east capacity would be needed to guarantee adequate levels of diversification and competition in CEECs (Zachmann 2017). This additional investment (estimated at EUR 1 bn) would be unnecessary in case NS2 is not built (Kotek *et al.* 2017). The resulting additional capacity is likely to cause either a lock-in – potentially contradicting the EU's decarbonisation objectives – or asset stranding in either NS2 or other infrastructure. In the latter case, European taxpayers or consumers would have to bear the cost. Apart from infrastructural adaptation, other instruments for risk mitigation would be the EU antitrust discipline – which has already proven effective in targeting discriminatory practices. Also, a change in the delivery points of existing contracts may be an opportunity for several CEECs clients to renegotiate contractual terms at more favourable conditions – i.e. by asking for a reduction of ToP levels.

The second option is a phase-out of long-term contracts in a future that would be dominated by dynamic pricing based on gas-to-gas competition in a seamless European internal market. NS2 gas sold on the German GASPOOL hub might, in this

case, outprice gas coming from Ukraine in CEECs' market under LTCs, potentially benefitting traders to the detriment of CEECs mid-stream incumbents. It is probably under this condition that NS2 could contribute to the emergence of a more integrated – although Germany-centred – gas market in CEECs. If LNG is the price setting supply in the EU, the expansion of Russian capacity would permanently exert a downward pressure on the LNG import prices in both tight¹⁴ and loose¹⁵ LNG market conditions, benefitting the EU-27 overall (Hecking and Weiser 2017). This could, however, happen in a fully liberalised and interconnected EU market,¹⁶ the benefits of which are not yet entirely on display in the CEE region, partly due to slow implementation of the Third Energy Package (Goldthau 2016).¹⁷

A rush to renationalisation as well as command and control policies in gas markets in CEECs would be a likely outcome of NS2. Prospects for EU integration in gas markets would thus further diminish.

However, a scenario in which NS2 pushes CEECs towards liberalisation of their gas sectors and further integration with the rest of the internal market does not look entirely convincing. Countries such as Poland attribute a great deal of political significance to the reduction of imports from Russia. NS2 might push Poland or other CEECs towards even more interventionist policies and centralised control over their gas sector. In reaction to NS2, CEECs could embark on exclusive and potentially expensive LTCs with alternative suppliers (i.e. Qatar or the US). In the name of security considerations or requirements of geographical origin, they could remove flexibility from the system and consolidate fragmentation. In 2009, Polish incumbent PGNiG signed a 20 years contract with Qatargas, whose deliveries started in 2014, while a doubling of agreed volumes was signed in 2017.¹⁸ The agreed price was not disclosed, but the procedure signals Warsaw's focus on the geographical origin of gas, rather than on the contractual scheme. It should be considered that if LNG provides competition and flexibility, it mainly does it by way of short-term markets and uncontracted gas. All this seems to demonstrate the unlikelihood that NS2 could favour integration.

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1.4 RECOMMENDATIONS

The prospects for EU gas demand seem too uncertain to justify a sizeable increase of Nord Stream's capacity. Russia would be able to comply with its long-term contractual commitments through the existing infrastructure (if it is adequately maintained). But EU demand prospects are not the sole rationale for extending NS2.

Over the years, Gazprom has been facing many challenges, from rising competition to shrinking EU demand and price erosion. However, the firm successfully managed to keep its market shares by introducing elements of flexibility in its long-term contracts, thereby aligning LTC prices with hub prices on NWE trading platforms.

NS2 would enable Gazprom to pursue multiple commercial purposes at once. Through a volume-driven strategy, it could defend or even expand its market shares and fend off the growing competition stemming from LNG. Gazprom could also enhance its ability to spread uncertainty in the market, potentially deterring final investment decisions in rival projects. Last but not least, it could comply with LTC commitments regardless of what happens in Ukraine.

From an EU perspective, the flow diversion prompted by NS2 would benefit a few EU member states – notably Germany, Austria, the Netherlands, and France (and their energy operators) – at the expense of others, notably in Central and Eastern Europe. Whether the aggregate impact of NS2 will be zero-sum or positive will depend on Gazprom's marketing strategy. In case of a re-routing of LTCs to Nord Stream, CEECs are likely to suffer from a constrained access to Western short-term markets, which will result in persistent market concentration and high prices in the region. A shift towards more flexible contractual schemes (and removal of the remaining regulatory or physical bottlenecks) would enable regional markets to spread the benefits of competition to all consumers – including in CEE.

Regardless of the strategy, the company will follow, NS2 is likely to consolidate its market position and grant the company an additional competitive advantage vis-à-vis potential competitors.

Minimising potential abuses of such a privileged position would require the following actions to be taken by Europeans:

1 - Ensure correct and full implementation of mechanisms aimed at managing congestion and preventing capacity hoarding. The EU should ensure the full implementation of the Third Energy Package and strengthen the legal framework for the auctioning of short-term trading capacity. Despite advancements in the removal of physical and regulatory bottlenecks, the situation remains imbalanced. Congestion Management Procedures aimed at preventing contractual congestion, have

often been implemented too slowly.¹⁹ A relevant example is Poland, which despite a sufficient connection with GASPOOL and the Czech hub, and a high price premium on the day-ahead market for adjacent price zones, shows high levels of spare cross-border capacity and missed arbitrage opportunities. This situation results from the insufficient liberalisation of the Polish gas market.

2 - Adopt a more systemic or radical integration approach when revising the gas market design in 2020 (should the first action prove insufficient). The current system implies a voluntary market merger process of national gas trading zones. If this process does not lead to pan-EU gas price convergence due to the persistence of barriers such as cross-border tariffs, lack of interconnectors, physical and contractual congestion at interconnection points, alternative solutions should be considered. These should include the evolution towards a centrally organised gas market operated by a single transmission system operator (TSO) and overseen by a single regulator. A uniform tariff system should replace the current cross-border tariff system based on entry and exit between national market zones. The current system provides incentives for member states to compete for an entry point, thus giving leverage to external suppliers to divide clients. Should these proposals be found as moving towards a politically unacceptable level of centralisation, more nuanced advancements of integration can also be considered. At a minimum, however, they should aim to strengthen regional cooperation and limit the ability of foreign suppliers to segment the Internal Energy Market.

3 - Ensure that CEECs can rely on various options. By 2020, the infrastructure that will enable CEECs to rely on at least three different energy sources should be complete. Of particular importance are the Bulgaria-Serbia interconnector and the BRUA pipeline (4.4 bcm), which connects Bulgaria to Austria. These pipelines would thus connect CEEC demand with supply from the south through the Trans-Adriatic Pipeline (TAP) or the Bulgaria-Greece Interconnector (IBG), which is linked to the Greek regasification terminal of Alexandroupolis. Should CEECs be completely cut off from access to the western short-term market because of NS2 and should this translate into unfairly segmented

Should CEECs be completely cut off from access to the western short-term market because of NS2 and should this translate into unfairly segmented pricing, compensation mechanisms should apply.

pricing, compensation mechanisms should apply. 'Winner' countries could earmark part of their consumer surplus to fund the expansion of west-east corridors. Where related costs seem excessive compared to the potential local welfare losses as a result of NS2, alternative solutions include demand reduction – at least for the portion of the market that is at risk of remaining captive as a result of NS2. It would also be more consistent with the EU's climate objective to re-route investment towards RES deployment, energy efficiency, and renewable gas.

4 - Encourage, where necessary, regional pooling of gas purchase. Cartels of CEEC buyers could do this. The idea of joint purchases was originally put forward by the President of the European Council, Donald Tusk, in his early formulation of the Energy Union concept. The ambition was to establish a public purchasing agency on the same

basis as Euratom for uranium purchase. The final Energy Union Communication, however, watered down the concept but mentioned the possibility for private companies to proceed with joint purchasing on a voluntary basis, a system already adopted by Japanese importers to curb the price of LNG imports. Although the different deadlines of Gazprom's LTCs might become an obstacle, the re-routing resulting from the construction of NS2 could be an opportunity for a collective renegotiation on more favourable terms.

This chapter focused on the market dimension of NS2. While some member states believe that the mere implementation of the EU internal market principles would lead to price convergence, others do not fundamentally consider pricing mechanisms as useful instruments to deliver energy security. We will examine this issue in the next section.

2. An energy security perspective

The EU has traditionally framed energy insecurity as a market failure to be addressed by institutions ensuring that markets provide energy to consumers at a price as close as possible to the marginal cost.

However, since the 2004 enlargement to a group of countries particularly exposed to Gazprom's dominant position, and the supply disruptions that occurred in 2006 and 2009 due to pricing disputes between Gazprom and Ukraine's Naftogaz, energy security started developing as a specific template in EU's energy policy, especially after the Lisbon Treaty (2007) formalised the shared ownership of EU energy policy between the institutions and the member states.

In 2010, the EU adopted a Regulation on Gas Security²⁰ which established a framework for emergency cooperation and facilitated investments in reverse flows (standing at about 147 bcm capacity in CEE), regasification (holding at 210 bcm capacity in 2016, with more than 150 bcm of unused capacity), and storage capacity.

In 2014, the EU adopted an Energy Security Strategy,²¹ which went beyond the long-standing objective of route and supplier diversification. It took a broader approach that addressed demand reduction, the full implementation of the internal market, the development of domestic resources, and the support of renewables as factors for improving energy security. Stress tests²² held in 2014 revealed an improvement in resilience overall, although some vulnerabilities persist in South-East Europe (SEE).

In 2017, within the framework of the Energy Union, the EU adopted a solidarity principle. It foresees cross-border assistance if a supply shock occurs.²³

The package also enhances the Commission's role in the *ex-ante* evaluation of intergovernmental agreements on gas supply.²⁴

2.1 IMPLICATIONS FOR EUROPEAN ENERGY SECURITY

Thanks to recent and planned infrastructure and regulatory plans, **the possibility of a severe supply disruption in the EU looks increasingly remote, especially in a context of benign market conditions.**

Current spare import capacity largely exceeds supply – including from Russia – and will probably continue to do so in any future demand scenario. If correctly implemented, the EU Congestion Management Procedures will guarantee that any unused booked capacity (e.g. as a result of a politically motivated supply interruption) would be lost to competitors. Thus, if Russia were to intentionally or accidentally interrupt supply, it would be damaging for itself. Under the solidarity provisions, any cut-off of gas delivery to CEECs would oblige Germany to provide emergency supply to its eastern neighbours as a measure of last resort. By spreading the costs of gas cut-offs throughout Europe, such a provision limits the possibility for Russia to apply coercive practices to specific segments of the IEM.

Anyway, the current priority for Russia is to keep market shares and find an outlet for its production overcapacity. For that purpose, it has to convince clients about its reliability (despite the geopolitical uncertainties). It should be taken into consideration that Russia has so far failed in finding additional markets, and cannot, therefore, sell its production elsewhere. Finally,

in the context of the decarbonisation agenda, natural gas is less and less seen as a climate-compatible fuel for the medium to long run. Thus, **any supply interruption could end up undermining the confidence in natural gas as a secure and affordable source** and contribute to accelerating EU efforts towards reducing demand and moving towards alternative sources.

In the end, **NS2 does not fundamentally alter the energy security predicament of the EU**, since it does not necessarily reduce the EU's import capacity.

Framing energy insecurity as a simple matter of import capacity, however, is a narrow approach. It fails to take into consideration the geopolitical considerations and the enduring imperfections of the EU gas markets. Even in a relaxed market environment, energy can serve as a political tool. By moving its entry point from Ukraine to Germany, Russia will no longer depend on transit through CEECs to supply western European markets, making the former strategically more vulnerable (Riley 2016; Dudek 2017). Past events have fuelled mistrust. In the last months of the USSR, the Kremlin cut off oil to crush independence protests in the Baltics. Between 1991 and 2004, there were at least 40 politically motivated oil and gas delivery interruptions, mainly targeting post-Soviet countries such as Lithuania, Georgia, Belarus, and Turkmenistan (Larsson 2016). In 2014, Gazprom's supplies to several EU operators were reduced, raising questions about Russia's motivations ahead of a critical EU decision on the onshore ramification of Nord Stream, OPAL (Loskot-Strachota 2014).

With the construction of NS2, other security concerns may arise, especially as Russia would end up concentrating on a single route a disproportionate part of its exports to the EU. The full capacity of an expanded Nord Stream would amount to more than 25% of EU gas consumption. It would, therefore, be in the interest of both the EU and Russia to foresee contingency re-routing if necessary (including through Ukraine).

2.2 THE IMPACT OF NS2 ON DIVERSIFICATION

One of the main pillars of the EU's actorness in the field of energy security is the Union's support for gas route and supplier diversification. Efforts have accelerated since the gas crises of 2006 and 2009, and specific gas provinces to reach out in the EU's geographical vicinities are mentioned in key documents such as the Energy Union and the Energy Diplomacy Action Plan of 2015. As such, a relevant question is what kind of impact Nord Stream 2 would have in the EU's efforts to diversify its gas supplies.

NS2 (as a capacity extension that will allow a supplier to flood the outlet market) can intuitively be discouraging for competitors, and decrease the motivation to build up alternative capacity. In this regard, **Gazprom has often used communication to deter interest in diversification projects.**

The announcement of the South Stream project in 2007, for instance, aimed at hampering EU and US-backed efforts to ship Caspian gas to South East Europe. Russia is now playing a similar game concerning the landing point of the second string of Turkish Stream. It entertains uncertainty as to whether the final destination will be Turkey or Bulgaria.²⁵ More generally, the Russian government's claims on a forthcoming era of low prices²⁶ and abundant export capacity are also part of the same tactic to delay decisions or discourage investment in rival infrastructures (notably LNG) and thus reduce competition in the medium-to-long term. In a nutshell,

Warnings from the Russian government about a forthcoming era of low prices, together with the announcement of new capacity aim at delaying or discouraging investment decisions on rival infrastructures.

Gazprom is replicating in gas markets the successful communication strategy implemented by Saudi Arabia in oil markets. Causing price volatility and retaining crucial information from the market can deter energy investments (Boussena and Locatelli 2017).

Even if additional export capacity for Russian gas is not good news for alternative routes, **the EU's poor record in gas diversification has other political and commercial motivations.**

For example, the long-standing ambitions of the Southern Gas Corridor (SGC) – a flagship EU initiative aimed at importing gas from the Caspian, the Gulf and the Middle East – have translated so far into the modest capacity of the TAP-TANAP pipeline as – contrary to the initial expectations – Azerbaijan is set to be the only gas provider to the corridor. By 2020, the TAP-TANAP route will channel only about 8-10 bcm of Azeri gas to the final landing point in Italy. Paradoxically, its expansion may even end up carrying Russian gas, once the Russia-Turkey TurkStream pipeline is complete.

Today, the EastMed pipeline – a Project of Common Interest aimed at linking the Israeli and Cypriot offshore fields to Europe – is being challenged by more commercially sound options: the export of Eastern Mediterranean gas by way of Egypt's liquefaction facilities. Russia is also entering the LNG market with the launch of the Yamal' LNG project. Following its first shipping in 2017, it could turn into a major LNG exporter to Europe.²⁷

The EU's lack of success in diversifying gas supplies is not a surprise. **Large cross-border megaprojects carry significant commercial and geopolitical risks.** They

call for robust demand prospects and a safe international environment. The EU and its member states are neither necessarily willing nor able to guarantee both.

Demand prospects remain uncertain in light of the EU's decarbonisation agenda. Besides, to compensate for Russia's 'price dumping' that deters sound competition, more public funding would be needed to support diversification. However, given the EU's climate commitments, public support ends up under high scrutiny, as demonstrated by the criticism of the EIB's EUR 1 bn loan to TAP. One should also consider that current alternative projects, like the Southern Gas Corridor, the EastMed or the Baltic Pipe, are set to provide a supply that would not be able to significantly erode Gazprom's market share, regardless of any preferential treatment they might obtain.

From a geopolitical standpoint, the EU and its member states can hardly guarantee the safety of infrastructures and operations in contexts where tensions are present. In Eastern Turkey, Kurdish militias have repeatedly attacked energy routes running through Turkey, namely the Southern Gas Corridor. In the Eastern Mediterranean, Turkey did not hesitate to use its navy to stop Eni's exploration activities following a dispute on exploitation rights in Cypriot waters. The war in Syria has put an end to an EU-supported project to ship gas from Egypt to Turkey through Jordan and Syria.²⁸ Furthermore, Islamist attacks have repeatedly targeted gas pipelines across the Sinai, which are expected to ship Eastern Mediterranean gas to Egypt for their liquefaction before their export. As for the EastMed pipeline,²⁹ the exploitation rights for offshore fields are contested, while political standoffs threaten critical infrastructure among coastal states and between states and non-state actors.

These cases expose the limits of the EU in diversifying gas supply. As a regulatory authority, the EU can only achieve diversification through markets. Russia can deter alternative supply on a commercial basis, and could be prevented to do so only through a reduction of Russian capacity – a policy which however would be problematic to pursue, as it would, in the end, challenge the EU's energy security in phases when global markets undergo tight conditions.

As a result, instead of diversification, the EU should seek to maximise its hand by creating new options. If the downward effect of new infrastructures on prices

Large cross-border megaprojects carry significant commercial and geopolitical risks. They call for robust demand prospects and a safe international environment. The EU is neither necessarily willing nor able to guarantee both.

Even if additional export capacity for Russian gas is not good news for alternative routes, the EU's poor record in gas diversification has other political and commercial motivations.

outweighs its financial cost, there is a case for supporting spare capacity. All in all, **the evolution of LNG markets toward more liquidity and flexibility provided more energy security for Europe and constraints to Gazprom than large diversification projects.**

In the end, NS2 will have a differentiated impact on the several regions of the IEM as for the prospects for diversification. In south-eastern European countries (SEECs), the least diversified and most fragmented and vulnerable section of the EU's gas market, NS2 will have a much lower impact than the expansion of its sister project in the south, Turkish Stream, in terms of challenging the rationale for diversification.

In NWE markets, NS2 will deter the competition from LNG: Gazprom can use the expanded capacity to flood the EU market, let prices tumble and thus cut the ground from under competitors' feet.

In CEE, the picture remains unclear due to the uncertainty regarding Gazprom's marketing strategy. Assuming that Gazprom would re-route its east-west LTCs on NS2, CEECs may lose access to non-Russian gas from their western neighbours because of the resulting west-east congestion. The segmentation of the internal market would reinforce the rationale for opening new entry points to the CEE regional market. If NS2 goes ahead, Kotek *et al.* (2017) forecast a significant rise in the net present value and benefit/cost ratio of several gas diversification projects. The net present worth of the LNG terminal in Krk would rise by 129% and the Greece-Bulgaria Interconnector by 338%. It could also spur further interconnection between CEECs and SEECs.³⁰

However, if Gazprom commits to providing competitive prices and contracts (in alignment with the conclusions of the EU antitrust investigation), alternative assets will not be used, and consumers will bear the costs (Chyong 2017). All in all, **NS2 might not necessarily deter the rationale to build alternative infrastructures – but could make it more expensive.**

2.3 RECOMMENDATIONS

On an aggregate level, one should not overestimate NS2's direct impact on the EU's energy security. Economically, the EU can build on sufficient optionality in most of its territory, and the most vulnerable areas of the internal energy market only call for relatively small interventions. Politically, any accidental or intentional

supply disruption would push Europe towards accelerating the phasing out of natural gas in the medium to long run. Nevertheless, by depriving several CEECs of their transit role, NS2 could expose them to political blackmail from Moscow. Strategically, the concentration of sizeable capacity on one single route can be a security concern, unless both Russia and the EU can divert Nord Stream flows through other routes if an accident occurs. Risk mitigation calls for keeping Ukraine's corridor operational.

The EU has a poor record in diversifying its gas routes. But NS2 can make the situation worse. First and foremost, it can create uncertain or unfavourable conditions for investment in alternative projects. Within the EU, this impact will be unevenly distributed. In CEE, it will depend on Gazprom's pricing and contractual strategies. All in all, if Gazprom aggressively defends its market shares, NS2 would worsen the business case for diversification efforts.

To mitigate the abovementioned risks to its energy security, the EU should adopt the following additional recommendations:

1 - Update the stress tests. The EU should perform new stress tests taking into account the construction of NS2 and the various scenarios regarding the usability of Ukraine's GTS. Stress tests should also consider different scenarios regarding the global supply of LNG. Since 2008, the EU has built on the abundant supply of LNG to fuel a growing perception of resilience to supply shocks. Such an abundance, however, is not necessarily here to stay. Several studies have already pointed out that small emerging markets might help to drain the glut (Kott and Losz 2017), while the rapidly expanding Chinese and Indian regasification capacity may absorb supply in the future.

2 - Get diversification right. If NS2 helps Gazprom's to consolidate its market position, the diversification of routes and suppliers will become paramount to guarantee adequate levels of security and competition. The expansion of Russian capacity, however, would risk making investments in diversification more expansive and exposed to the risk of going stranded. As such, interventions should be limited to small, critical interconnectors and flexible infrastructures such as floating storage and regasification units (FSRU) – LNG vessels that can act as both ships and onshore installations. These could prove pivotal in improving optionality in the most vulnerable segments of the EU market.³¹

Any infrastructure effort should involve careful planning to ensure that it brings net positive welfare to consumers, even when used only partially. In light of the EU's decarbonisation objectives, the risk of carbon lock-in or asset stranding should not be overlooked when EU financial support is provided. Aid should go to new gas infrastructures on the condition that they could serve in future for the transport and storage of renewable gas (biogas and RES-based hydrogen and synthetic gas).

Part of the resources for energy security should be diverted to diversify energy sources and boost demand reduction.

At the same time, energy diplomacy efforts should be devoted to promoting reform of the energy sector among leading suppliers, and promoting international principles of energy governance together with other significant importers to support well-supplied, liquid, and flexible LNG markets, which proved way more effective in constraining Gazprom's market power and political leverage than command-and-control diversification policies.

3. A legal and political perspective

The extent to which NS2 complies with EU law has been the subject of controversy. This section first assesses whether NS2 complies with the main principles of the EU Gas Directive. It then discusses the applicability or not of the EU Gas Directive to NS2. It also considers the pros and cons of giving the European Commission the mandate to settle the legal regime of the offshore section of NS2 with Russia and amendments to the Gas Directive to extend the application of EU law to all import pipelines. Finally, it discusses the project's political dimension in light of the EU's Energy Union initiative. Political frictions are rising within the EU as well as between Germany and the United States, with significant implications for the EU and US policies towards Ukraine.

3.1 NS2 AND THE THIRD ENERGY PACKAGE

According to the Gas Directive, pipelines can be of three sorts: there are transmission pipelines (pipelines connecting two network systems), upstream pipelines (pipelines that are part of or connected to a production project), and distribution pipelines (pipelines connecting the system to the end consumers). The Directive does not apply to the latter two. But NS2 mainly qualifies as a transmission pipeline: it does not run directly from a field and it connects two network systems.

According to the box above, NS2 appears incompatible with the 2009 Gas Directive. Following the withdrawal of the European partners from the consortium in 2016, Gazprom is the only owner.³² Third Party Access (TPA) cannot be guaranteed due to Russian legislation, which gives Gazprom a monopoly on exports via pipelines (Dudek 2017). The non-discriminatory tariff setting also makes little sense if TPA does not apply.

On exemption grounds, NS2 also looks problematic. Considering the EU definition of security of supply, the Commission can hardly exempt a pipeline allowing Gazprom to consolidate and expand its market position. By rejecting the applicability of EU legislation, the project promoters have made it clear that the investment is going ahead with or without the EU's consent. Such evident incompatibility with the EU Gas Directive helps to understand why most of the legal controversy surrounding NS2 focuses on the applicability of EU legislation.

3.2 DIVERGING VIEWS ON THE REMIT OF THE THIRD ENERGY PACKAGE

The Third Energy Package (TEP) has been the subject of many legal interpretations.

The EU legal framework fully applies within the EU territory, which includes 88 km of Danish territorial waters and 50 km of German land territory, internal waters and territorial waters). This raises questions about the regime that applies to the Nord Stream section running outside EU waters, notably in the exclusive economic zone (EEZ) of coastal states.



The Gas Directive 2009/73

The Gas Directive 2009/73, which is part of the Third Energy Package, remains the most relevant EU legislation when it comes to gas infrastructures. Its main principles are:

- **Ownership unbundling** or the separation between the network ownership, which can belong to a transmission system operator (TSO) or an independent system operator (ISO), from the production and transport operations.
- **Third party access** (or the obligation of a pipeline operator to grant access to competitors on equal grounds).
- **Non-discriminatory tariff setting** or the obligation to set tariffs that are transparent and applied with no discrimination.

Exemptions can still be granted (Art 36) in case:

- (i) a new infrastructure enhances competition and security of supply;
- (ii) the waiver is a pre-condition for the investment to take place;
- (iii) charges must be levied; or
- (iv) the exemption should not be detrimental to competition or the effective functioning of the internal market for natural gas, or the efficient functioning of the regulated system to which the pipeline is connected.

The European Commission holds the final say on accepting or rejecting the exemption application.

Here, EU and national legislation would only apply in line with environmental and resource exploitation provisions under the United Nations Convention on the Law of the Sea (UNCLOS). However, many experts argue that a pipeline cannot be subject to different legal regimes between EU and non-EU territory and therefore call for an extraterritorial extension of EU law (Dudek 2017) to the whole pipeline.

Building on the same assumptions, the German regulator, Bundesnetzagentur, came to the opposite conclusion. Given that the onshore section of NS2 is tiny compared to the offshore part, and that separate legal regimes cannot apply to the same project, it concluded that the application of TEP would be inappropriate.³³ On the offshore section, the argumentation goes, the same regime as for other pipelines should apply. A few precedents support this interpretation. Intergovernmental agreements between the supplier and importer country define the legal systems of African pipelines such as Green Stream and Medgaz. Nord Stream 1, however, is not the subject of an Intergovernmental Agreement (IGA). The European Commission and member states avoided considering whether EU law should apply.

Others oppose this approach based on the precedent of the Yamal pipeline, whose section on EU territory was fully aligned with the Union's regulatory regime – suggesting the retroactivity of the TEP (Riley 2016). Consequently, Nord Stream 1 should not be exempt from EU law. Others defended the Commission's inactivity on Nord Stream 1 on the basis that the project was initially intended to ship gas from the Shtokman field to the EU, thus qualifying as an upstream pipeline, even though the EU never acknowledged its upstream status (Offenberg 2016). Another relevant point is that, if the TEP is theoretically applicable to Nord Stream 1, the EU ignored the legal regime applying to this pipeline for political reasons.

All in all, the jury is still out until the European Court of Justice gives its interpretation, as the only authoritative body to provide an EU-wide final legal perspective. Opinions of national regulators still need to abide by a commitment to look at energy security from a national perspective, while the European Commission openly clarified to have a clear political stake when stating that the “Commission does not like Nord Stream 2 politically”.³⁴

3.3 A NEGOTIATION MANDATE: OPPORTUNITIES AND RISKS

The Commission's legal service found that EU law had not foreseen mechanisms to achieve the Gas Directive's competition and transparency objectives with regard to pipelines connecting member states with third countries (such as Nord Stream). However, as it is not possible to apply different regulatory regimes to the same pipeline, the Commission concluded that there is a conflict of law in the EEZ section of the pipeline that requires international negotiation.³⁵ On June 2017, it asked member states for a mandate to negotiate with

Russia an intergovernmental agreement that defines the applicable regime.³⁶

A unanimous backing of the mandate by member states, conditioning the expansion of the pipeline to the extension of EU rules, would provide the opportunity to institutionalise energy relations between Europe and Russia, in line with the EU's traditional objective to align third countries' regulation to its own. More specifically, Moscow would have to ensure the independent ownership of the infrastructure and reign in Gazprom's pipeline export monopoly (partial dismantling). Of course, Russia could refuse to negotiate. However, a Russian refusal to bargain, should the mandate be approved, would leave Germany with no other option but to walk out of NS2. This outcome would be far worse for Russia than engaging in negotiations.

In a different scenario, the Council might reject the mandate as a result of the opposition of Germany and other countries supportive of NS2 such as Austria and the Netherlands. **This outcome would deprive the Commission of any legal and political legitimacy** (Yafimava 2017). Such a scenario would be detrimental to the EU's credibility in the energy field.

3.4 AMENDING THE GAS DIRECTIVE: OPPORTUNITIES AND RISKS

In late 2017, the Commission also proposed to amend the Gas Directive in a way that would make it more difficult for Russia to refuse to negotiate.

The Commission's proposal extends its definition of an interconnector – currently applied to intra-EU cross-border pipelines – to all pipelines between member states and third countries up to the border of the EU's jurisdiction. In effect, this would extend to such cross-border pipelines all the rules on unbundling, non-discrimination, transparency and TPA as well as eligibility for EU funding. Member states would be required to ensure that all new infrastructures with a cross-border dimension are fully compatible with the Gas Directive, and to cooperate with third countries' authorities to this end. As the proposal would apply to existing infrastructure as well, a derogation regime is foreseen as long as its application is temporary and not detrimental to competition or security of supply.

If the directive revision enters into force before the construction of NS2, such a pipeline would not be eligible for a derogation, but for a standard exemption under the existing Gas Directive provision – whose conditions, as mentioned before, would make NS2 hardly eligible.

The Commission's amendments would provide Gazprom with an incentive to negotiate an intergovernmental agreement that would prevail over the Gas Directive. If adopted, the amended Directive would ideally strengthen the chances for a negotiation that would put NS2 (at least partly) in line with the EU regulatory regime.

However, such a proposal contains risks too. The possibility of triggering a new wave of negotiations between member states and several foreign suppliers could negatively interfere with ongoing processes aiming to reform the energy sector in these countries. Algeria is a relevant case. It has been struggling recently to attract new investments to develop its oil and gas sector. Today, it needs to meet a surge in domestic gas demand against a backdrop of falling production. Before the end of 2018, the country plans to reform its energy law to make the investment environment more attractive to foreign – notably European – firms.

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Egypt is undergoing a similar process. Changing the rules for exporting gas in the midst of a reform process will be hardly appreciated by these exporters. Not to mention Libya, where the current political chaos would provide little indication on who will renegotiate Green Stream's operational regime.

However, assuming that the scenario of the approval of the Gas Directive review by the Council materialises and puts an end to the legal dispute, issues about the political impact of NS2 would be far from solved. Even if the project could change the aspects that go against EU rules – a change for which the EU would have leverage if member states accepted to provide a legal and political backing – NS2 would remain politically problematic.

3.5 THE POLITICAL DIMENSION

Regardless of any legal assessment, the NS2 pipeline discussion is taking place in a particular political moment, considering Russia's annexation and destabilisation of part of Ukraine's territory, hostile cyber-activities, the spread of online misinformation to influence elections in western countries, and particular activism in the Middle East in a direction not positive for European interests.

Moreover, NS2 is in contradiction with several of the political objectives of the Energy Union Communication and the Energy Diplomacy Action Plan endorsed by the Council.³⁷ Both documents stress that the EU must

- (i) diversify energy sources, suppliers and routes;
- (ii) maintain a transit role for Ukraine; and (iii) make energy partnerships consistent with relevant foreign policy goals.

As regards diversification, we have explained in section 2 how the expansion of Russian capacity would consolidate its position in the EU market.

Regarding the transit role of Ukraine, NS2 would significantly diminish it. Ukraine would thus lose transit revenues estimated at EUR 2 bn per year. It would also struggle to buy gas from the EU due to the possible congestion of West-East routes as a result of NS2. Ukraine would thus rely more heavily on Gazprom's supply from the East (Zachmann 2018).

As for the EU, its economic interest is to continue gas transit through Ukraine. First, the Ukrainian GTS is the only transit corridor for Russian gas to the EU that is not under Gazprom's control. Second, Ukraine is part of the Energy Community Treaty, which foresees regulatory approximation of the Ukrainian energy legislation to the EU. Finally, Ukraine has at its disposal a storage capacity which is much larger than the rest of Central and Eastern Europe, which could be an energy security asset for the region (Wieczorkiewicz and Genoese 2014). In strategic terms, the EU has a lot to lose from the loss of Ukraine as a transit route, given that the country's transit role poses a constraint to Russia's foreign policy options towards Kiev. **Any further weakening of Ukraine is against Europe's interests. The EU would potentially have to confront a further degradation of its security situation**, the cost of which is impossible to gauge at this stage.

Even if the project could change the aspects that go against EU rules – a change for which the EU would have leverage if member states accepted to provide a legal and political backing – NS2 would remain politically problematic.

An example of how NS2 could remove constraints on Russia's political manoeuvring was evident in the 2018 ruling of the Stockholm arbitration court, which terminated a longstanding commercial dispute between Gazprom and Naftogaz in favour of the latter.³⁸ Without NS2 in the picture, Russia would have had no option but to maintain a conciliatory stance vis-à-vis the ruling. However, the plans to circumvent the Ukrainian route through NS2 enabled Gazprom to take more assertive steps. It immediately announced that it would start procedures to terminate transit through Ukraine.³⁹ Within the current context, Gazprom has an incentive to

escalate tensions as any worsening of the dispute would prompt Western European buyers (notably Austrian and German ones) to support an expansion of Nord Stream to avoid the Ukrainian transit route. All in all, the simple idea of **Nord Stream's expansion alters the balance of power between Gazprom and Naftogaz in favour of the former, with the consequence of undermining the facilitation and deal-brokering role the European Commission has been playing between the two firms.**

NS2 also yields a divisive political impact on intra-EU relations. In general terms, Northwestern European countries – relying on diversified gas markets – mainly see Nord Stream as an additional way to mitigate a possible tightening of the global LNG markets. CEECs instead tend to look at NS2 as yet another attempt by Russia to use energy policy for political purposes and to consolidate Gazprom's grip on their isolated and poorly diversified markets.

To date, a profound rift has emerged between **Germany** and **Poland**, which hold opposing views on energy security. Germany tends to frame the latter in economic terms and considers hosting a gas entry point as an opportunity to serve a more substantial portion of the internal energy market. However, political considerations also play a role. Germany pursues a geo-economic strategy and sees economic success as a vital component of its external influence (Szabo 2014). Business and political elites close to the Social Democratic Party have been historically supportive of a strategic rapprochement with Russia, stressing the complementarity of the two economies – an export-driven economy with a strong manufacturing base and a resource-rich economy craving for know-how and consumers goods. Such a view holds that economic exchange reduces the need for foreign policy assertiveness. Hence, further commercial integration between Europe and Russia would tilt the balance between security and economic interests in favour of the latter. Recent history, however, suggests that this hardly applies to Russia, where the interests of security and business circles are strongly correlated, especially in the energy sector.

On the other hand, **Poland** sees energy issues as part of a broader geostrategic framework (Gawlikowska-Fyk *et al.* 2017) where security concerns play a significant role in defining the country's economic interests. In a nutshell, Warsaw does not believe that the market and solidarity mechanisms of the IEM can guarantee its energy security (Giuli 2017). In 2016, seven CEECs and SEECs wrote a joint letter to the Commission's Vice-President responsible for the Energy Union, in which they stressed that NS2 could worsen energy geopolitics in Europe.⁴⁰ Their representatives often criticise Germany's double standards when it comes to European solidarity.⁴¹ They consider Nord Stream as part of an undesired geostrategic rapprochement between Germany and Russia (Westphal and Lang 2017). Still, Poland's criticism of NS2 is not solely geopolitical. The country also aims to become a regional linchpin of diversification through its LNG terminal in Świnoujście. Its five bcm capacity is set to expand to 7.5 bcm by 2022. Poland also aims at importing five bcm of gas from Norway through Denmark thanks to

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the Baltic Pipe project, which has received EU financial support under the Connecting Europe Facility and expects a final investment decision by the end of 2018. PGNiG, the Polish state-owned gas incumbent, has recently increased its investment in Norwegian fields.

The idea of an East-West divide around NS2 is, however, not so straightforward. CEECs are not all in the same situation. **Slovakia** could also lose out as it ships most of the flows from Ukraine to Austria's Baumgarten hub. NS2, in connection with the construction of a Czech-Austria connection (the BACI pipeline),⁴² would diminish the Slovak role, which could be partly compensated by shipping gas from the west to Ukraine, or the gas coming from Nord Stream to SEE via the Easting pipeline.⁴³ On the contrary, NS2 might give the **Czech Republic** more transit centrality to the detriment of Slovakia. In **Hungary**, a strengthened transit role (between CEE and SEE) would compensate potential losses in its storage business. The **Baltic States**, although marginally touched by NS2 in commercial terms, join Poland in criticising the pipeline on strategic grounds. They argue the project could further weaken Ukraine and become a political instrument.

Other countries are involved as well. Among large western European countries, Italy and France are in an ambiguous position on the NS2 controversy. **Italy** opposes NS2, as it would further consolidate Italy's status as an end consumer, frustrating its ambition of becoming a gas hub for a more extensive market area thanks to diversified and expanding infrastructure (De Maio 2016). Also, there is a widespread perception among Italian politicians that the EU gave different treatment to Nord Stream and South Stream, a project supported by Rome and led by Eni against which the Commission built up a compelling legal case that ultimately led Gazprom to cancel the pipeline. Italy has close bilateral relations with alternative suppliers in Algeria, Libya, and Egypt. As such, it opposes NS2 out of commercial interest, but at the same time it is sceptic about the Commission's quest for enhanced actorness and stands against any confrontation with Russia on energy matters.

France is also in a conflict of interests. Whereas Engie (a partly state-owned French energy firm) is part of the group of European investors in NS2, President Macron seems more inclined than his predecessors to contain

Russia's geostrategic ambitions. On the diplomatic front, Macron is spending significant political capital to reassure the US about France's commitment as a security partner, and to counter President Trump's dismissive characterisation of the EU as a proxy for German interests. The French leader could logically become more critical towards NS2, but there has been no evidence of this so far. While Macron is usually outspoken about the EU's actorness as an amplifier of French climate diplomacy, his position on fuel security remains unclear.

Among the Nordic countries, **Sweden** and **Denmark** raise security concerns related to the stationing of Russian personnel on their islands during the construction of NS2. The Danish Parliament recently approved a law enabling the government to halt the project in case national security concerns arise.⁴⁴ A trilemma, however, appears for Denmark. While the country is usually close to US security interests, it is also profoundly integrated with Germany. Denmark might also be reluctant to support any change of framework that questions the UNCLOS' primacy – as such a convention can also serve as a shield to prevent Russian territorial claims in the Arctic region. **Finland** shares the same German/Austrian insistence on the fact that the project should not be politicised (Gotkowska and Szymanski 2016).

Its growing transatlantic dimension also fuels the geopolitical complexity of NS2. The US has always declared its firm opposition to the project. Since the 1990s, US energy diplomacy has been actively supporting diversification projects in Eurasia. Initially, it focused its attention on the Caspian region, with the double objective to provide non-Russian gas to Europe and reduce the former Soviet countries' dependence on Gazprom. More recently, the US has been supportive of the development of Eastern Mediterranean gas resources. Today, the US opposes NS2 because it would tighten Russia's grip on the European gas market and provide Moscow with a new pressure lever on German political and business elites by way of the strengthened interdependence between Russia and Germany. Such an outcome would be detrimental to the US, who considers Germany as the linchpin of sanctions enforcement in Europe at a time when transatlantic consensus on sanctions towards Russia is dwindling (Ivan 2018).

Some commercial considerations may also play a role. A cancellation of NS2 would lead to a compression of Russian export capacity and would make the EU a more contestable market for US LNG. Such an argument would sound compelling for the current Administration's interest to rebalance the US trade deficits with Europe and East Asia.

The question becomes whether Washington is willing and able to act, and, if so, through which channel. Regardless of its specific foreign policy priorities (often hard to predict because of the erratic current foreign policy course of the Administration), the US' new-found gas abundance makes it easier for the US to impose sanctions on energy exporters, as American hydrocarbons could maintain the global markets well

supplied and reduce the sanctions' consequences for allies (Sullivan 2017). In July 2017, the US Congress passed the Countering America's Adversaries through Sanctions Act (CAATSA),⁴⁵ which enables the President to issue sanctions targeting investments that "directly and significantly contribute to the enhancement of the ability of the Russian Federation to construct energy export pipelines". Despite the ambiguous language of the Bill and of the Guidelines issued by the State Department regarding its scope of application (Vicari 2018), the US has been adamant that NS2 fall under its remit.

A US envoy clearly said in Brussels that any company involved in Russian energy pipelines faced under CAATSA an elevated sanctions risk.⁴⁶ Immediately following CAATSA's approval, the European Commission issued a list of projects which would be at risk of being targeted, including NS2. Despite the hype, the US conceded that the triggering of sanctions would be subject to coordination with allies. This decision was the result of European lobbying to the House of Representatives, strongly backed by an unusually blunt reaction by German Minister for Foreign Affairs Sigmar Gabriel and Austrian Chancellor Christian Kern. The two politicians stated in a letter that US unilateralism on sanctions would have "diminished the effectiveness of the two countries' stance on Ukraine" – which is, as mentioned, deeply important for the US. As Germany demonstrated to have enough leverage to shield its business community from US unilateralism, notably by way of its crucial role in the implementation of existing sanctions towards Russia, **CAATSA may never apply.**

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Until CAATSA, the US adopted sanctions in close coordination with the EU. Unilateralism on energy-related sanctions would not prove as potent. It could also easily backfire, fostering mistrust between Berlin and Washington without significantly affecting the intra-EU balance of power regarding the NS2 controversy. In the aftermath of CAATSA's adoption, intra-EU divisions deepened as Poland, and other CEECs showed support for it – as the last hope to prevent NS2 –, while the European Commission ended up siding with the promoters of NS2 to protect vital European economic interests. This development ultimately served the interests of Russia, which found another opportunity to stimulate transatlantic and intra-European divisions.

There are good arguments against any unilateral approach on sanctions. However, **considering the**

geopolitical stakes with NS2 and the US' role as the main guarantor of collective security in Europe, one cannot simply dismiss Washington's opposition to NS2 as intrusive. At a time when the US seems willing to reconsider its global role, when transatlantic cleavages are deepening on issues more vital for Europe's (and Germany's) interests – such as the future of the Iran nuclear deal, the global trade system, and defence spending – NS2 adds fuel to the fire. **So even if one argues for more European strategic autonomy, which might among other things imply that the US should not have a say on Europe's energy matters, NS2 is not the right point to start.** Europe's lack of strategic autonomy is first and foremost the result of diverging preferences between EU member states, and a pipeline fostering divisions between capitals would further undermine the Union's strategic autonomy.

Broader political considerations may have driven a recent shift in Chancellor Angela Merkel's tone on NS2. She publicly acknowledged the political dimension of the pipeline in April 2018.⁴⁷ Merkel expressed support for maintaining some gas transit through Ukraine, marking a departure from the traditional insistence on avoiding political meddling in commercial projects. Moscow has been showing a conciliatory tone following Merkel's comments, insisting that transit through Ukraine will not be phased out. These remarks show that Germany is not entirely indifferent to the growing geopolitical pressure around NS2 and that western leaders are far from powerless regarding this project. However, German authorities simultaneously issued the required permits for the pipeline project to go ahead, in conformity with the administrative procedures and the legalistic approach that German government has endorsed so far. **In practice, it is not clear how Germany intends to guarantee the continuation of flows through Ukraine – an objective which is attainable only by constraining alternative routes for the supply of Russian gas.** Once NS2 and Turk Stream are operational, Russia will have at its disposal enough capacity to circumvent Ukraine. Thus, Russia and Germany should turn their pledge to continue using this transit route into concrete deeds that should be practically and politically sustainable in future.

In case Berlin is not willing to reconsider the appropriateness of NS2, **a possible way out of the impasse for Germany could be to use its relevance for Russian energy and strategic interests to push Moscow towards sound behaviour on the political front** – possibly in coordination with other allies. The fact that the German Chancellor has both acknowledged the political dimension of NS2 and declared her will to maintain transit through Ukraine should now translate into binding commitments. For example, the expansion of Nord Stream could be conditioned to Russia's full implementation of the Minsk II package.⁴⁸ Finally, the option of adding 'merely' one string for Nord Stream, rather than two, should be explored. Raising the pipeline's capacity by 27.5 bcm rather than 55 bcm would help keeping the case for transit through Ukraine (and Belarus) in the future.

With NS2 entering more and more into actors' calculations in a wider geopolitical arena, it is doubtful

how the EU can play an effective role when it can mainly pursue its external energy objectives by way of norms. However, even if the Union pursues its external energy objectives within a normative context rather than through coercive diplomatic means, this does not imply that EU policies are void of self-interest. The EU can hardly separate regulatory and political considerations. In the field of energy, the EU's objectives are political. Typically, the Union discretionarily selects the infrastructures it supports financially. The extension of the Gas Directive would only be another attempt to make use of regulation to exert influence on foreign actors – a widely recognised declination of the transformative power of the EU at the regional and global stage. Keeping energy relations with external suppliers away from the camp of politics would be a steep path to follow when foreign suppliers are engaged in hostile political actions towards European countries, show no desire to move relations towards rule-based patterns, and have a proven track record of using energy to gain geopolitical advantages against EU interests. As such, the EU is right when it politicises energy regulations or wants to exert pressure on member states that put intra-EU solidarity at risk.

However, this also shows the limits of EU instruments. The debate should not focus on whether the EU should choose between being a political or regulatory actor, as several commentators maintain (Goldthau 2017). It should instead concentrate on the fact that the EU is ill-equipped to pursue its political objectives. The EU has always been adamant that it has no instruments at disposal to stop NS2. The ball is in the member states' camp, and their preferences have not been sufficiently put in alignment by the development of the IEM. The internal market has not changed member states' national framing of energy security, which is ultimately defined by their energy mix, political relations with external gas suppliers, and their perceived exclusive responsibility for their citizens' and business' access to energy. Ultimately, the misalignment of external energy interests among member states plays as a diminishing factor in the EU's ability to collectively act at international level. At the same time, divisions in foreign policy preferences operate as a significant stumbling block to the full development of a seamless internal market.

3.6 RECOMMENDATIONS

NS2 is hardly compatible with the EU legislation on gas infrastructures in its current form. The application of EU law is contested based on conflicting interpretations. For the European Commission, the current rules do not specify the regulatory framework that should apply to the pipeline. It wants, therefore, to negotiate with Russia directly, despite opposition from both Moscow and several member states. The Council's support for a mandate and a revision of the Gas Directive would enhance the EU's external energy actorness. It would also provide an opportunity for aligning Russia's legislation on both gas infrastructures and exports with the EU framework. A refusal by the Council would deprive the Commission of the necessary political cover to act and would de facto undermine the Energy Union.

Still, any solution to the legal dispute would hardly solve the political inconsistency of NS2 with the principles of the Energy Union. The impact of NS2 would remain geopolitically detrimental for both transatlantic relations and intra-EU relations. This situation exposes the limits of EU action as a normative power in the field of energy relations with third countries. It calls for the EU member states to step in and agree on what constitutes the Union's shared external energy interest.

Based on the above, the EU and its members should:

- 1 - Extend the Gas Directive and give a negotiating mandate to the Commission to define a legal regime for import pipelines.** Intra-EU divisions should be overcome through an intra-EU 'grand gas bargain', where Germany would endorse the abovementioned provisions and the CEECs would speed up the full implementation of the Third Energy Package. Germany can hardly persuade CEECs and SEECs to fully open up their markets or give up their governments' grip on the energy sector as long as they hold that the internal market puts their energy security at risk or threatens to worsen their economic conditions. Such a 'grand bargain' should also set the stage for a future commitment to strengthen centralised competences for supervision, regulation, and energy security.
- 2 - Develop a clear and extensive derogation regime for existing pipelines and LNG.** To avoid alienating several of its member states, the EU should also provide a generous derogation scheme for existing infrastructures, ensuring solid prospects for those countries, especially in North Africa, that are starting to reform their energy sector. Arguably, the regulatory fragmentation resulting from the derogation would not be desirable in the long run.
- 3 - Approve NS2 under specific political conditions.** France and Germany, as signatories of the Minsk II agreement and beneficiaries of NS2, should condition the project to the full implementation of the Minsk II agreement by Russia. They must secure clear and enforceable guarantees on continued transit through Ukraine. If Germany were to use its economic weight for the benefit of its allies and their strategic interests, rather than against them, it would reassure CEECs, Ukraine, and the US. A compromise solution could also include the addition of one string only to Nord Stream, rather than two, in order not to expand the pipeline capacity to the extent that would lead to the possible end of transit through Ukraine.
- 4 - Push Ukraine to lower its transit tariffs.** Ukraine could do more to present itself as an attractive transit corridor. Many buyers in Western Europe consider NS2 as a viable alternative not only on security grounds due to pricing disputes and instability but also due to unreliable transit fees and slow progress with unbundling. The EU should exert its influence over Ukraine to persuade Kiev that a foreseen rise in transit gas fees would strengthen

the commercial case for NS2. If the objective is to maintain transit through Ukraine, the GTS should provide Gazprom with the same commercial agility to counter the LNG competition that NS2 would grant.

5 - Insert import infrastructures in the National Energy and Climate Plans. Considering the impact of flow diversions as a result of the construction of a significant pipeline such as NS2, it should be mandatory for the landing country to hold

consultations with all countries potentially affected. In case a common understanding cannot be reached, the EU should have the authority to step in. Ideally, ACER would get the final word. Granting the arbiter role to an independent agency rather than to the Commission would be less politically divisive. The 2020 review of the gas package should strengthen its position. Consultations should take place within the framework of the National Energy and Climate Plans (NECPs) proposed in the Commission's 2016 Governance Regulation.

Conclusions

This paper analysed the likely commercial, security, legal, and political impact of NS2 on the EU from a European perspective. The debate about NS2 is taking place in a relaxed energy environment from a global demand and supply perspective. Nevertheless, given the poor state of relations with Russia, the political context is charged.

Economically, it is Gazprom's future marketing strategy that will determine the impact of NS2 on prices, competition or the EU's overall energy security. Not defined to this date, Gazprom usually defines its strategy in reaction to exogenous variables related to global market conditions (which remain unknown). All in all, remarkable advancements in the EU's regulatory framework and infrastructure network – together with a period of benign market conditions and the introduction of flexible gas trading technologies – have significantly reduced Gazprom's ability to abuse its dominant market position. The EU has strengthened its hand. Some stronger enforcement and minor adjustment in the Union's gas market design would probably be enough to tackle the commercial and security risks linked to NS2, although the political will for adopting these additional steps remains unclear.

Nevertheless, one cannot separate these technical considerations from the overall political picture. Recent developments seem to lead to a world order where transactional power politics take precedence over the promotion of multilateral rule-based systems. The EU needs to adopt a flexible approach that combines

support for the primacy of norms as a preferred option in external relations and backing of more traditional hard power instruments when needed.

NS2 exposes the way to go for the EU to turn energy from a weakness into a strength. The internal energy market is ten years old. Despite the addition of a focus on energy security, it has not yet managed to align member states on their external supply options. If Russia can no longer 'rule' the EU gas market – as a result of heightened competition and unfavourable court rulings – it can still 'divide'. Member states are still competing against each other to become gas hubs, or they do not trust the IEM's price or solidarity mechanisms as instruments to ensure energy security. The EU has limited instruments to bridge these divergences. Energy security became a shared competence since the entry into force of the Lisbon Treaty, but who would be ultimately responsible for that is still an unsolved matter of interpretation. The internal energy market has the ambition to become 'single' but does not yet have an established joint regulator. While energy remains a shared competence, member states have no obligation to consider the European interest when selecting their foreign suppliers.

All this suggest that rather than a 'grand bargain' between the EU and Russia (the timing of which seems questionable), a 'grand energy bargain' is first needed within the EU. In a nutshell, the Energy Union is more the start of a long journey than a 'mission accomplished'.

- ¹ <https://www.bloomberg.com/news/articles/2017-07-17/big-oil-sees-salvation-in-gas-but-what-if-it-s-the-wrong-bet>
- ² <http://energypost.eu/europes-gas-demand-falling-doesnt-anybody-notice/>
- ³ Including here Germany, France, Denmark, Italy, Belgium, Austria and the Netherlands.
- ⁴ Including Poland, Hungary, Slovakia, and the Czech Republic.
- ⁵ <http://www.dutchnews.nl/news/archives/2018/01/nam-to-cut-gas-production-substantially-following-groningen-earthquake/>
- ⁶ <https://uk.reuters.com/article/uk-eu-gazprom-antitrust/eu-ends-antitrust-case-against-gazprom-without-fines-idUKKCN1IP1K4>. To settle the case, Gazprom proposed to revise pricing in LTCs every two years and put prices in line with those on short-term western hubs at the request of clients. It also suggested removing destination clauses preventing CEECs from trading among themselves the gas they do not consume, allowing swaps of delivery points, and withdrawing any financial claim against Bulgaria in response to the cancellation of the South Stream project. The European Commission accepted Gazprom's proposal in May 2018.
- ⁷ The buyer either takes the contracted volumes or pays the seller a penalty.
- ⁸ Such clauses prevent the buyer to resell the gas outside a defined geographic area.
- ⁹ <https://www.ft.com/content/53068c2c-2254-11df-9a72-00144feab49a>
- ¹⁰ Cost insurance freight terms.
- ¹¹ <https://www.platts.com/latest-news/natural-gas/london/russias-gazprom-edges-towards-flexible-gas-market-26210724>
- ¹² Following an antitrust investigation launched in 2012, the Commission uncovered in 2015 the territorial restrictions (destination clauses) Gazprom had applied to several Central and Eastern European gas markets. It also evidenced that Gazprom had leveraged its dominant position to condition supplies on commitments regarding infrastructure (http://europa.eu/rapid/press-release_IP-15-4828_en.htm). To avoid a fine or a court sentence, Gazprom followed most of the Commission's recommendations. (<https://www.ft.com/content/19a3c188-cc67-11e6-b8ce-b9c03770f8b1>)
- ¹³ Revenues decreased by USD 23 bn between 2013 and 2015, while Gazprom's market capitalisation collapsed by USD 300 bn (Franza 2016).
- ¹⁴ Assumed by the study as an LNG demand in Asia 20% higher than IEA projections for 2020.
- ¹⁵ Assumed by the survey as an LNG demand in Asia 5% lower than IEA projections for 2020.
- ¹⁶ Assuming there is an extension of the EU network in line with the EU's Ten-Years Network Development Plan (TYNDP).
- ¹⁷ ACER found that as of 2016 six member states have implemented the CMP guidelines only partially and that the dynamic recalculation of technical and additional capacity is not implemented at all in six member states – notably in CEE and SEE (https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Implementation%20Monitoring%20Report%20on%20Congestion%20Management%20Procedures%20-%20Update%202016.pdf).
- ¹⁸ <https://www.reuters.com/article/qatar-poland-lng-idUSL5N1GR30N>
- ¹⁹ On the basis of the Gas Regulation, the European Commission provided guidelines in 2013 to manage the allocation of additional capacity (capacity above the technically available capacity) at interconnection points, in order to ensure market integration, non-discrimination, effective competition, and the correct functioning of the market. Implementation by member states is reviewed annually by the Agency for the Cooperation of Energy Regulators (ACER). Instruments foreseen to manage contractual congestion include oversubscription and buyback schemes, day-ahead use-it-or-lose-it, voluntary capacity surrender, and long-term use-it-or-lose-it.
- ²⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:295:0001:0022:EN:PDF>
- ²¹ <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52014DC0330&qid=1407855611566>
- ²² https://ec.europa.eu/energy/sites/ener/files/documents/2014_stresstests_com_en_0.pdf
- ²³ The solidarity principle, included in Regulation (EU) 2017/1938 of the European Parliament and the Council repealing Regulation (EU) 2010/994, establishes a binding mechanism to be used as a last resort to assist neighbouring countries' households, essential social services, and district heating. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1938&from=EN>
- ²⁴ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0684&from=EN>
- ²⁵ <https://www.euractiv.com/section/global-europe/news/russian-pm-turkish-stream-can-enter-eu-via-bulgaria-or-greece/>. A few months later, Bulgarian PM Boyko Borissov asked for the EU's support in hosting a landing point for Turkish Stream (<https://www.euractiv.com/section/energy/news/bulgaria-warns-eu-is-becoming-over-dependent-on-gas-transited-via-turkey/>).
- ²⁶ <https://www.reuters.com/article/us-bolivia-gas-summit-novak/russia-warns-global-gas-oversupply-could-trigger-price-crisis-idUSKBN1D0200>
- ²⁷ Yamal LNG is a joint venture including Novatek, Total, CNPC and the Silk Road Fund. The facility started the first LNG shipments in 2017. Its annual liquefaction capacity amounts to 21 bcm. <https://www.total.com/en/energy-expertise/projects/oil-gas/lng/yamal-lng-cold-environment-gas>
- ²⁸ In 2006, Egypt, Jordan, Syria, Turkey, Lebanon and Romania reached an agreement to extend the Arab Gas Pipeline (connecting at that time Egypt to Syria via Jordan) to Turkey in order to take additional gas to the Southern Gas Corridor and consolidate Turkey's ambitions to become a hub for the EU's diversification efforts. The agreement for the construction of the Syria-Turkey segment between Homs and Kilis was signed in 2008. In 2004, The European Investment Bank contributed to fund the Jordan segment Aqaba-Rehab of the Arab Pipeline with EUR 100 M. http://europa.eu/rapid/press-release_BFI-04-56_en.htm?locale=en
- ²⁹ <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy/projects-by-country/multi-country/7.3.1-0025-elcy-s-m-15>
- ³⁰ Kotev et al. calculation adopts the ENTSG methodology assuming 25 years lifetime and 4% real discount rate. Apart from single infrastructures, both net present value and benefit/cost rates show substantial increases if additional interconnections are considered, i.e. connecting the Krk terminal to Hungary, and the IGB to Bulgaria, Romania, and Hungary, or to Serbia.
- ³¹ FRSU capacity rose from 0.8% to 10.2% of the global regasification capacity between 2006 and 2016. Concerning onshore regasification facilities, FSRU requires half the time to be taken to the market and cost between 50% to 60% of onshore facilities.
- ³² Gazprom refused to sell shares in the joint venture to NS2 European partners, as Polish competition authority UOKiK objected that the pipeline would consolidate Gazprom's dominant position in Poland's gas market. Although NS2 does not cross Polish territorial waters, the acquisition of NS2 shares by the five European partners needed the approval of the Polish watchdog as these firms hold assets in Poland (<https://www.ft.com/content/97491341-152b-3c13-8961-7fbf3b87540c>).
- ³³ Letter of J. Homann, President of the Bundesnetzagentur, to the European Commission's Director General for Energy D. Ristori, 3 March 2017 <http://en.euractiv.eu/wp-content/uploads/sites/2/2017/03/German-regulator-on-Nord-Stream-2.pdf>
- ³⁴ <http://www.euractiv.com/wp-content/uploads/sites/2/2017/03/Commission-on-Nord-Stream-2.pdf>
- ³⁵ http://europa.eu/rapid/press-release_IP-17-1571_en.htm
- ³⁶ <https://euobserver.com/tickers/137461>
- ³⁷ <http://data.consilium.europa.eu/doc/document/ST-10995-2015-INIT/en/pdf>
- ³⁸ In June 2014, Gazprom and Naftogaz submitted a multi-billion claim against each other before the Stockholm Arbitration Court, an international arbitration body in charge of solving the commercial dispute. The ruling, issued in February 2018 awarded Naftogaz of damages worth 4.63 bn USD, which net to the damages awarded to Gazprom would result in a due amount of 2.56 bn USD by Gazprom to Naftogaz. <https://www.reuters.com/article/us-ukraine-crisis-russia-gazprom/ukraines-naftogaz-claims-2-56-billion-victory-in-gazprom-legal-battle-idUSKCN1GC2Z8>
- ³⁹ <http://www.dw.com/en/russias-gazprom-to-terminate-gas-contracts-with-ukraine/a-42814931>
- ⁴⁰ <https://uk.reuters.com/article/uk-eu-energy-nordstream/eu-leaders-sign-letter-objecting-to-nord-stream-2-gas-link-idUKKCN0W11YV>
- ⁴¹ CEECs representatives often mention Germany's requests of solidarity on migration issues, notably related to the controversial issue of refugee quotas, contrasting with German unilateralism on, among others, energy issues.
- ⁴² <http://www.gasconnect.at/en/Fuer-Kunden/Sales-Transmission%20neu/Netzentwicklungsplanung/BACI>
- ⁴³ <http://www.eastring.eu/>
- ⁴⁴ <https://www.reuters.com/article/us-denmark-pipeline/denmark-passes-law-that-could-ban-russian-pipeline-from-going-through-its-waters-idUSKBN1DU19L>
- ⁴⁵ <https://www.treasury.gov/resource-center/sanctions/Programs/Pages/caatsa.aspx>
- ⁴⁶ <https://euobserver.com/energy/141376>
- ⁴⁷ <http://www.dw.com/en/merkel-casts-doubt-on-nord-stream-2-gas-pipeline/a-43328058>
- ⁴⁸ The Minsk II package is the name of the roadmap agreed in 2016 by the leaders of France, Germany, Russia, and Ukraine to solve the conflict in Donbass.

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